Claims

1. Method for identifying seat occupancy in a vehicle (1), in
which high-frequency radiation is emitted to a seat (2) and

5    the high-frequency radiation is transmitted to a receiver (E)
as a function of occupancy and evaluated in respect of
radiation intensity,
characterized in that
in a vehicle (1) with a plurality of seats (2) to be

10   monitored,
a wave field (H) is emitted by just one transmit unit and
received in a control unit (S) via a receive unit to determine
occupancy of a respective seat.


15   2. Method according to claim 1,
characterized in that at least one reflector (9, 12) that can
be distinguished from other reflectors (9, 12) is assigned
respectively to each of the seats (2).


20   3. Method according to one of the two preceding claims,
characterized in that the ability to make a distinction is
achieved by modulated reflection and/or switching the
reflectors (9, 12) on and off at time intervals and/or
changing a beam direction of the wave field (H).

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4. Method according to one of the preceding claims,
characterized in that at least one reflector (9) is arranged
in or on an associated seatbelt (6) for each seat and when the
belt (6) is fastened, said reflector (9) is moved into a
5    position in a wave field (H) emitted by the high-frequency
transmit unit, in which the at least one reflector (9)
receives and correspondingly transmits back significantly more
electromagnetic high-frequency energy than when the belt (6)
is in an open passive position.
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5. Method according to the preceding claim,
characterized in that in an open passive position the belt (6)
is essentially drawn and/or retracted into an
electromagnetically screened area, in particular into a belt
15   tensioner (GS).


6. Method according to one of the two preceding claims,
characterized in that this method is implemented as an
alternative to or in combination with at least one other
20   method for determining occupancy of a seat, in which
reflectors (12) are arranged in and/or on a seat surface (4),
a backrest (5) and/or a headrest of the seat (2).


7. Method according to one of the preceding claims,
25   characterized in that the method is implemented in combination
with a method for access control and/or for starting the

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vehicle, in particular at intervals and/or after activation by a pre-crash sensor or similar accident early warning system.

8. Method according to one of the preceding claims, characterized in that the comfort applications in a vehicle (1) are activated with at least one result or output signal of the method.

9. Method according to one of the preceding claims, characterized in that user-friendly operation in a passive access control and start system in a vehicle (1) is activated with at least one result and/or output signal of the method, in particular the release of engine start functions and/or a steering wheel lock, which only takes place if the driving seat (2) is detected as being occupied by an adult and a customer identification device (CID) is present in the interior, demonstrating access and start authorization in a contactless fashion.

10. Method according to one of the preceding claims, characterized in that at least one result or output signal of the method is processed as an information source for safety applications, in particular to activate an airbag system, a belt tensioner (GS) and/or to adjust a headrest.

11. System for identifying seat occupancy in a vehicle (1)
with a control unit (S) to activate the generation of a high-
frequency wave field (H) and to evaluate a radiation intensity
transmitted as a function of occupancy to a receiver,

5   characterized in that

only one transmit unit is provided to provide a wave field (H)
to determine occupancy of a respective seat in a vehicle (1)
with a plurality of seats (2) to be monitored and

the high-frequency transmit unit is aligned to emit high-

10   frequency radiation to a respective seat (2), with reflector
elements (9, 12) being arranged in the area of a seat (2) to
reflect the high-frequency radiation as a function of
occupancy to a receive unit and the transmit unit and the
receive unit being connected to a control unit (S) for

15   activations purposes and/or to evaluate signals in respect of
radiation intensity.


12. System according to the preceding claim,
characterized in that at least one reflector (9, 12) that can

20   be distinguished from other reflectors (9, 12) is assigned
respectively to each of the seats (2).


13. System according to one of the two preceding claims,
characterized in that at least one reflector (9) is arranged

25   in or on an associated seatbelt (6) for each seat.

14. System according to one of the preceding claims 11 to 13, characterized in that the system is configured to implement a method according to one or more of the above claims 1 to 10.

5    15. System according to one of the preceding claims 11 to 14, characterized in that the additional hardware required compared with known systems is essentially combined in the control device (S).